

STATE OF SOUTH CAROLINA

(Caption of Case)

Application of Duke Energy Carolinas, LLC for
Approval of EE Vintage 0 Revenue Requirement

BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

COVER SHEET

DOCKET

NUMBER: 2011 - 40 - E

(Please type or print)

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DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other:

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)			
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input checked="" type="checkbox"/> Letter	<input type="checkbox"/> Request	
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification	
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation	
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement	
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment	
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter	
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response	
<input type="checkbox"/> Railroad	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery	
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition	
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation	
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena	
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff	
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input checked="" type="checkbox"/> Other: Correction	
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest		
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit		
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report		

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December 20, 2011

Jocelyn Boyd, Esquire
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

**Re: Application of Duke Energy Carolinas, LLC for Approval of EE Vintage 0
Revenue Requirement, Docket No. 2011-40-E**

Dear Ms. Boyd:

I write to provide corrections to the comments filed on September 6, 2011 in the above-captioned docket on behalf of the Southern Alliance for Clean Energy (SACE) and the South Carolina Coastal Conservation League (SCCCL). Specifically, the comments contained two mathematical errors concerning the estimated savings Duke achieved, as a percentage of energy sales, through its residential and non-residential programs.

The comments state that, in Vintage 0, the estimated savings achieved by Duke's residential programs represents roughly 0.54% of residential sales and the estimated non-residential program savings represents about 0.22% of non-residential participants sales. However, these energy savings estimates fail to account for the South Carolina allocation factor of 27%. When corrected to account for the allocation factor, we conclude that in Vintage 0, the estimated savings achieved by Duke's residential programs represents roughly 0.16% of residential sales and the estimated non-residential savings represents about 0.06% of non-residential participants sales. Attached please find a revised version of the September 6, 2011 comments that reflects these two corrections.

Thank you and please do not hesitate to contact me if you have any questions.

Respectfully submitted this 20th day of December 2011.

s/ J. Blanding Holman, IV
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September 6, 2011, corrected on December 20, 2011

Jocelyn Boyd, Esquire
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

**Re: Application of Duke Energy Carolinas, LLC for Approval of EE Vintage 0
Revenue Requirement, Docket No. 2011-40-E**

Dear Ms. Boyd:

Southern Alliance for Clean Energy and the South Carolina Coastal Conservation League (collectively, “Petitioners”), through counsel, respectfully submit the following comments and recommendations concerning Duke Energy Carolinas, LLC’s (“Duke” or “the Company”) Application for Approval of EE Vintage 0 Revenue Requirement (“Application”), which Duke filed on July 22, 2011.¹

Petitioners have reviewed the Company’s application and communicated with Duke staff and with the South Carolina Office of Regulatory Staff (“ORS”) about the filing—all of which have assisted Petitioners in developing their position in this docket. Petitioners generally support Duke’s EE Vintage 0 revenue requirement of approximately \$5.97 million.² Duke’s programs are performing well and the Company seems to be succeeding in delivering cost-effective energy efficiency resources to its customers. Indeed, the benefits of Duke’s residential and non-residential programs appear to exceed costs by a ratio of more than 2:1, and Duke has achieved significant savings for its first partial year, June 2009 to January 2010, or Vintage 0. However, in its Application, Duke did not explain its use of the 15% earnings cap in calculating the Vintage 0 revenue requirement. Moreover, Petitioners have concerns relating to Duke’s evaluation, measurement and verification (“EM&V”) process, including the need for clear timelines for filing robust EM&V reports with the Commission and for applying EM&V results to energy savings estimates, and an energy savings true-up for Vintage 0.

For the reasons that follow, Petitioners generally support Duke’s application but recommend that the Company (i) explain its use of the 15% earnings cap in determining the Vintage 0 revenue requirement; (ii) provide a schedule or timeline for completing future EM&V reports so it is clear when vintages will be verified and finalized, and file

¹ In their petition to intervene, dated August 24, 2011, Petitioners indicated that they would present their position in this docket in the form of written comments to be filed by September 6, 2011. These comments were prepared with the assistance of Natalie Mims, Energy Policy Manager at Southern Alliance for Clean Energy.

² Application at 3.

the reports with the Commission upon completion; (iii) provide a clear timeline for applying EM&V results to energy savings estimates for each program in the mid-term and final true-ups; and (iv) include an energy savings true-up for Vintage 0 in its EE Vintage 3 Rider filing.

I. Duke's EE programs appear to be performing well and achieving substantial energy savings.

Petitioners have reviewed Duke's Application in this docket and Petitioner SACE is in the process of completing an analysis that compares the impacts of energy efficiency programs operated by Duke and Progress Energy Carolinas in North and South Carolina. What follows are some general observations about Duke's programs during Vintages 0 and 1.

A. Residential Programs

Duke estimates that, in Vintage 0, its residential programs achieved approximately 40 GWh of annual energy savings "at the plant" (including line loss), which reflects avoided generation.³ Using the South Carolina allocation factor of 27%, the residential retail billed sales for South Carolina in 2010 were approximately 7,400 GWh.⁴ Accordingly, in Vintage 0, the estimated savings achieved by Duke's residential programs represents roughly 0.16% of residential sales.

The benefits of Duke's residential programs, on a system level, for Vintages 0 and 1, exceed costs by a ratio of more than 2:1, even accounting for the forecasted cost of Duke's performance incentive at the maximum cap, i.e. 15%.⁵ More data would be needed to calculate participant benefit-cost ratios, but considering that most of the energy savings are due to free CFLs, it is reasonable to conclude that participating customers benefitted. Moreover, in light of the fact that the system benefits of residential energy efficiency programs more than double the costs, it is likely that non-participants will not only be made whole with respect to the avoided cost portion of the revenue requirement, but will benefit over time because the remaining benefits could more than offset the lost revenues portion of the rider.

Duke will true up Vintage 1 savings in its EE Vintage 3 filing.⁶ Based on data filed in North Carolina, it appears that while Duke's monthly bill impact is relatively typical (neither high nor low), its actual residential energy savings for 2010 are substantially higher than those of many of its peer utilities, including utilities in Florida, Iowa, Rhode Island, Colorado, Minnesota, Arizona, Washington, and Arkansas. In other words, Duke's 2010 program impacts represent more energy savings for the same customer bill impact—more "bang for the buck"—as compared to its peers. We

³ Exhibit 5 of Application.

⁴ See Exhibit 2 of Application and DEC's 2010 IRP at 108.

⁵ Analysis based on data provided in Application and by DEC in NCUC Docket E-7 Sub 979.

⁶ Order No. 2010-79 at 18.

commend Duke for delivering substantial energy savings with minimal impact on customer bills.

B. Non-Residential Programs

Duke estimates that, in Vintage 0, its non-residential programs achieved about 27 GWh of annual energy savings “at the plant.”⁷ Using the South Carolina allocation factor of 27%, the non-residential retail billed sales for South Carolina in 2010 were approximately 12,500 GWh.⁸ Accordingly, the estimated non-residential program savings represents about 0.06% of non-residential participants sales.

For Vintage 0 and Vintage 1, the benefits of Duke’s non-residential programs exceed costs by a ratio of more than 2:1, even if the forecast cost of Duke’s performance incentive at the maximum cap is included in the calculation.⁹ Duke’s energy savings impact, at a system level, for its non-residential energy efficiency programs are relatively typical for a first year of a utility-led energy efficiency program, and the Company has operated its non-residential programs at a cost that is well within industry norms, even compared to more experienced utilities.

II. Duke should explain its use of the 15% performance-based earnings cap.

Duke requests approval of its Vintage 0 Revenue Requirements in accordance with the modified Save-A-Watt cost recovery mechanism approved by the Commission in Order No. 2010-79 in Docket No. 2009-226-E. The modified Save-A-Watt mechanism provides avoided cost savings targets for Vintage Years 1-4, and associated performance-based tiered earnings caps.¹⁰ If the Company achieves 90% or more of its targeted savings at the end of its four-year period, i.e. at the end of Vintage 4, it will be allowed to earn up to a 15% return on investment.¹¹ Here, DEC calculated its Vintage 0 earnings based on a 15% earnings cap, but failed to explain its use of the maximum cap.

Vintage 0 covers the period spanning from the implementation date of the EE and DSM programs approved in Docket No. 2009-166-E (June 1, 2009) to the effective date of the EE Vintage 1 Rider approved in Docket No. 2009-226-E (January 31, 2010). Vintage 0 is different from Vintages 1-4 in that the revenue requirement is being recovered via an offset to the existing DSM costs owed to customers pursuant to Order No. 2010-79, rather than through an EE rider, and it does not have an associated energy savings projection like the other vintage years.¹²

⁷ Application, Exhibit 5.

⁸ DEC 2010 IRP at 109-110.

⁹ *Supra* note 5. The data needed to calculate participant benefit-cost ratios is not readily available, and we did not conduct an assessment of non-participant benefits due to the availability of the opt-out for most non-residential customers.

¹⁰ Commission Order No. 2010-79, Exhibit 1 at 18. *See also* Dir. Testimony of DEC witness Smith at 9, Docket No. 2009-226-E.

¹¹ *See* Dir. Testimony of DEC witness Smith at 5, Docket No. 2009-226-E.

¹² *Id.* at 10.

As stated previously, the benefits of Duke's programs are exceeding costs and Petitioners believe Duke is on track to meet its energy savings targets. As a result, application of the 15% earnings cap to Vintage 0 appears reasonable. However, proper explanation and documentation is critical in EE revenue requirement and rider requests. In its Application, Duke did not explain its use of the 15% cap. We believe an explanation is warranted and would help the Commission and the parties better understand and evaluate Duke's Application and future rider requests.

In response to conversations with Duke about its Application, Petitioners understand that Duke recently filed with the Commission a supplemental letter explaining its use of the 15% cap in Vintage 0 and what would happen in the event that the Company does not achieve the avoided cost savings necessary to earn a 15% return. The letter states as follows:

Order No. 2010-79 in Docket No. 2009-226-E provides that the revenue requirements associated with Duke Energy Carolinas' Energy Efficiency (EE) and Demand-Side Management (DSM) programs for the Vintage 0 time period will be netted against the DSM balance established by Order No. 91-1022. The Company intends to apply the earnings cap described under the Modified Save-A-Watt Proposal in Docket No. 2009-226-E to the Vintage 0 revenue requirements based on the Company's ability to meet its avoided cost target. Application of the earnings cap will be determined by comparing the Company's avoided cost target to the avoided costs actually achieved during Vintages 1 through 4. If the Company does not achieve the avoided cost savings necessary to earn a 15% return, a portion of the Vintage 0 revenue requirements will be refunded to customers consistent with the Settlement Agreement approved by Order No. 2010-79.

This language addresses Petitioners concern and we therefore support such a supplement to Duke's Vintage 0 filing.

III. Duke's initial EM&V studies are good, but process improvements are needed.

Based on documentation recently filed with the North Carolina Utilities Commission ("NCUC"),¹³ the quality of Duke's EM&V studies appears to be very good, and the findings provide at least initial confirmation that the Company has selected appropriate deemed savings values for its lighting measures. Thus far, Duke has verified deemed savings values for non-residential high-bay lighting installed with prescriptive incentives and residential CFLs installed via customer coupons. Attachment 1 to these comments contains two tables that illustrate the verified savings for these lighting

¹³ *In the Matter of Application of Duke Energy Carolinas, LLC For Approval of DSM and Energy Efficiency Cost Recovery Rider Pursuant to G.S. 62-133.9 and Commission Rule R8-69*, NCUC Docket No. E-7 Sub 979

measures. As the tables show, evaluated savings for Duke's residential CFL coupon program were somewhat below original deemed savings estimates, but evaluated savings for the non-residential high bay lighting measures are substantially higher than what the Company had anticipated.

The quality of these studies notwithstanding, Duke has not filed any EM&V reports with the Commission. Indeed, in this proceeding, Duke has filed its final true up for Vintage 0 without providing the Commission with EM&V documentation for participation or energy savings verification, and there is no established process for sharing its EM&V studies with the Commission upon completion. Moreover, Duke's mid-term EM&V true up in Vintage 3 will "incorporate the most recent available EM&V results to update assumptions and to revise planned spending, savings, projected revenue and projected kW and kWh impacts,"¹⁴ but there is no set date for obtaining the EM&V results to be used in this true-up.

EM&V is a critical step in ensuring that energy efficiency programs are cost-effectively saving the utility and ratepayers money. Petitioners strongly support the implementation of cost-effective energy efficiency programs and believe that programs that are not achieving energy efficiency savings as planned must be re-evaluated for opportunities to modify program design, increase participation, and/or reduce cost. It is therefore important that Duke provide EM&V results in a timely manner to ensure that the Commission and ORS can determine whether the programs are achieving cost-effective savings.

In light of the importance of EM&V, Duke should provide a schedule or timeline for when it will complete future EM&V reports and should file detailed EM&V documentation with the Commission as soon as each EM&V report is completed.¹⁵ Filing EM&V documentation upon the completion of the studies would resolve documentation issues in advance of future annual EE/DSM rider proceedings, thereby fostering robust program evaluation and encouraging program improvement while still allowing for timely cost recovery. Additionally, Duke should provide a clear timeline for applying EM&V results to program energy savings estimates for the true-up, including the start, end and effective dates of the EM&V reports.

IV. DEC should true up its Vintage 0 energy savings in its EE Vintage 3 Rider filing.

According to the modified Save-A-Watt mechanism, Duke will true-up Vintages 1-4 for actual kW and kWh savings and lost revenues through a "final true-up process, based on independently measured and verified results, after the evaluation of the program results when the four-year period is complete."¹⁶ It is unclear from its Application how

¹⁴ Order 2010-79 at 67.

¹⁵ Petitioners note that DEC provided a schedule for EM&V reports in its annual energy efficiency and DSM compliance filing in North Carolina. See NCUC Docket E-7, Sub 979.

¹⁶ Dir. Testimony of DEC witness McManeus at 14, Docket No. 2009-226-E.

Duke adjusts for verified actual results for Vintage 0. Petitioners believe that Company should use actual, trued-up load impacts, rather than deemed savings values, in determining its actual savings results for Vintage 0. We therefore recommend that, in its EE Vintage 3 Rider filing, DEC true up its energy savings for Vintage 0 programs based on EM&V.

V. Conclusion & Recommendations

In conclusion, Duke appears to be on the right track to capturing increasing amounts of energy efficiency savings, and providing ratepayers with low cost, reliable, energy resources. Petitioners commend Duke for its program performance and generally support its Application in this docket. Based on the issues raised herein, Petitioners recommend that Duke take the following actions: (i) explain its use of the 15% earnings cap¹⁷; (ii) provide a schedule or timeline for completing future EM&V reports so it is clear when vintages will be verified and finalized and file the reports with the Commission upon completion; (iii) provide a clear timeline for applying EM&V results to program energy savings estimates in the mid-term and final true-ups; and (iv) include an energy savings true-up for Vintage 0 in the EE Vintage 3 Rider filing.

Petitioners look forward to continuing to work with Duke and ORS to ensure that the Company's programs succeed in saving energy and money for South Carolinians.

Respectfully submitted this 20th day of December, 2011.

s/ J. Blanding Holman, IV
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Attorney for Petitioners

¹⁷ Petitioners believe that Duke has provided sufficient information, and thereby has already implemented this recommendation, through its supplemental letter filed today with the Commission.

Attachment 1

Table 1: Savings for Residential CFL Coupon Verification¹⁸

Annual Energy Savings (MWh)	North Carolina	South Carolina	Total
Based on deemed savings	95,174	28,827	124,001
Based on evaluated savings	79,687	24,136	103,823
<i>(Over)/Underestimate</i>	<i>-15,487</i>	<i>-4,691</i>	<i>-20,178</i>
Evaluated Savings as a % of Deemed Savings	84%	84%	84%
Annual Capacity Savings (kw)	North Carolina	South Carolina	Total
Based on deemed savings	8,748	2,650	11,398
Based on evaluated savings ¹⁹	8,424	2,551	10,975
<i>(Over)/Underestimate</i>	<i>(324)</i>	<i>(98)</i>	<i>(422)</i>
Verified Savings as a % of Deemed Savings	96 %	96 %	96 %

Table 2: Savings for Non-Residential High-Bay Lighting Verification²⁰

Annual Energy Savings (MWh)	North Carolina	South Carolina	Total
Based on deemed savings	19,320	9,012	28,333
Based on evaluated savings	38,834	14,420	53,254
<i>(Over)/Underestimate</i>	<i>19,514</i>	<i>5,408</i>	<i>24,921</i>
Evaluated Savings as a % of Deemed Savings	201 %	160 %	188%

¹⁸Calculated from savings per bulb and bulb count data provided in DEC's filing in NCUC Docket No. E-7, Sub 979. See Dir. Testimony of Ossege at 12 and Exhibit A at 40, respectively, NCUC Docket No. E-7, Sub 979.

¹⁹ Total net program coincident kW savings (free riders plus spillover).

²⁰Ossege Exhibit B at 61, NCUC Docket No. E-7, Sub 979.

December 20, 2011
 Petitioners Comment Letter
 Docket No. 2011-40-E

Annual Capacity Savings (kW)	North Carolina	South Carolina	Total
Based on deemed savings	4,644	2,166	6,810
Based on evaluated savings	6,084	2,253	8,337
<i>(Over)/Underestimate</i>	<i>1,440</i>	<i>97</i>	<i>1,537</i>
Verified Savings as a % of Deemed Savings	131 %	104 %	122 %

STATE OF SOUTH CAROLINA
BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2011-40-E

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In the Matter of:)	
)	
Application of Duke Energy)	
Carolinas, LLC for Approval of EE)	CERTIFICATE OF SERVICE
Vintage 0 Revenue Requirement)	
)	
)	

I certify that the following persons have been served with one (1) copy of Petitioners' Corrected Comments via electronic mail and U.S. First Class Mail at the addresses set forth below:

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s/ J. Blanding Holman, IV
J. Blanding Holman IV
On behalf of Petitioners

This 20th Day of December 2011